

CLAIMS

1. A transport system for a portable auger comprising:

a lever tube having a first lever tube end and a second lever tube end;

5 a power source frame for mounting of an auger power source, the first lever tube end rigidly connected to the power source frame,

a pivot tube having a first pivot tube end and a second pivot tube end, the first pivot tube end rigidly connected to the first lever tube end;

an axle housing, having a first axle housing end and a second axle housing end, the second pivot tube end rigidly connected to the axle housing;

10 a transport powered drive unit having a power output shaft, the transport powered drive unit mounted internal to the axle housing;

a powered wheel axle having a first powered wheel axle end and a second powered wheel axle end, the first powered wheel axle end suitably connected to the power output shaft, the second powered wheel axle end protruding from the first axle housing end;

15 a drive hub inserted on the second powered wheel axle end, the drive hub suitably attached to the second powered wheel axle end to freewheel about the powered wheel axle, the drive hub having means for attachment of a first wheel;

a means for selectively locking the drive hub to the powered wheel axle to prevent the drive hub from freewheeling about the powered wheel axle; and

20 a free wheeling axle having a first freewheeling axle end and a second freewheeling axle end, the first freewheeling axle end suitably connected to the second axle housing end, the second freewheeling axle end protruding from the second axle housing end, the second freewheeling axle end having means for attachment of a second wheel.

25 2. The transport system of claim 1 wherein the means for selectively locking the drive hub to the powered wheel axle comprises an opening in the powered wheel axle; an opening in the drive hub; and a hub locking pin, whereby insertion of the hub locking pin in the openings in the powered wheel axle and the drive hub locks the drive hub to the powered wheel axle.

3. The transport system of claim 2 further comprising a means for locking the power output shaft to prevent rotation of the power output shaft.

4. The transport system of claim 3 wherein the means for locking the power output shaft comprises an opening in the powered wheel axle; an opening in the axle housing and a drive axle pin, whereby insertion of the drive axle pin in the openings in the axle housing and the powered wheel axle locks the power output shaft.

5 5. The transport system of claim 3 wherein the means for locking the power output shaft comprises an opening in the power output shaft; an opening in the axle housing and a drive axle pin, whereby insertion of the drive axle pin in the openings in the axle housing and the power output shaft locks the power output shaft.

6. The transport system of claim 1 wherein the power source is pivotally mounted to the
10 power source frame, whereby the power source maintains a horizontal orientation when the transport system is pivoted about the powered wheel axle and free wheeling axle.

7. The transport system of claim 1 wherein the first powered wheel axle end is suitably connected to the power output shaft by a connecting sleeve, the connecting sleeve suitably fastened to the first powered wheel axle end and the power output shaft.

15 8. An axle assembly for a transport system for a portable auger, the axle assembly comprising:

an axle housing, having a first axle housing end and a second axle housing end;

a transport powered drive unit having a power output shaft, the transport powered drive unit mounted internal to the axle housing;

20 a powered wheel axle having a first powered wheel axle end and a second powered wheel axle end, the first powered wheel axle end suitably connected to the power output shaft, the second powered wheel axle end protruding from the first axle housing end;

a drive hub inserted on the second powered wheel axle end, the drive hub suitably attached to the second powered wheel axle end to freewheel about the powered wheel axle,
25 the drive hub having means for attachment of a first wheel;

a means for selectively locking the drive hub to the powered wheel axle to prevent the drive hub from freewheeling about the powered wheel axle; and

a free wheeling axle having a first freewheeling axle end and a second freewheeling axle end, the first freewheeling axle end suitably connected to the second axle housing end, the
30 second freewheeling axle end protruding from the second axle housing end, the second freewheeling axle end having means for attachment of a second wheel.

9. The axle assembly of claim 8 wherein the means for selectively locking the drive hub to the powered wheel axle comprises an opening in the powered wheel axle; an opening in the drive hub; and a hub locking pin, whereby insertion of the hub locking pin in the openings in the powered wheel axle and the drive hub locks the drive hub to the powered wheel axle.

5 10. The axle assembly of claim 9 further comprising a means for locking the power output shaft to prevent rotation of the power output shaft.

11. The axle assembly of claim 10 wherein the means for locking the power output shaft comprises an opening in the powered wheel axle; an opening in the axle housing and a drive axle pin, whereby insertion of the drive axle pin in the openings in the axle housing and the
10 powered wheel axle locks the power output shaft.

12. The axle assembly of claim 10 wherein the means for locking the power output shaft comprises an opening in the power output shaft; an opening in the axle housing and a drive axle pin, whereby insertion of the drive axle pin in the openings in the axle housing and the power output shaft locks the power output shaft.

15 13. The axle assembly of claim 8 wherein the first powered wheel axle end is suitably connected to the power output shaft by a connecting sleeve, the connecting sleeve suitably fastened to the first powered wheel axle end and the power output shaft.

14. A method of selectively freewheeling a drive wheel of a transport system for a portable auger, the method comprising the steps of:

20 providing an axle housing having a first axle housing end and a second axle housing end;
mounting a transport powered drive unit having a power output shaft internal to the axle housing;

connecting the first end of a powered wheel axle to the power output shaft;

inserting a drive hub on the second end of the powered wheel axle, the second end of the
25 powered wheel axle opposing the first end of the powered wheel axle, to allow the drive hub to freewheel about the powered wheel axle;

providing means for attachment of a first wheel on the drive hub;

connecting the first end of a freewheeling axle to the second axle housing end, the second
end of the freewheeling axle opposing the first end of the freewheeling axle;

30 providing means for attachment of a second wheel to the second end of the freewheeling axis; and

selectively locking the drive hub to the powered wheel axle to prevent the drive hub from freewheeling about the powered wheel axle.

15. The method of claim 14 wherein the step of selectively locking the drive hub to the powered wheel axle further comprises inserting a hub locking pin in an opening in the
5 powered wheel axle and the drive hub.

16. The transport system of claim 14 further comprising the step of selectively locking the power output shaft.

17. The transport system of claim 16 wherein the step of selectively locking the power output shaft comprises inserting a drive axle pin in an opening in the axle housing and the powered
10 wheel axle.

18. The transport system of claim 16 wherein the step of selectively locking the power output shaft comprises inserting a drive axle pin in an opening in the axle housing and the output power shaft.